

Loss Mitigation Grant Program Wind Resistive Device (WRD) Product Evaluation

The product as described herein has been evaluated by the Department of Commerce and Consumer Affairs (DCCA) for compliance with the technical requirements for wind resistive devices installed in single or multi-family residential dwellings. Installation costs of approved products are partially reimbursable under the provisions of the Loss Mitigation Grant Program. The results of the product evaluation are presented in the following report.

1.0 Product Information

1.1 Product Name:

3M Scotchshield (S25NVAR400) Window film

1.2 Description:

The 3M Scotchshield Window film is a laminated film applied to the surface of glazed openings to reduce the transmission of solar energy and to provide additional wind and impact resistance.

1.3 Category:

Submitted for evaluation as a WRD option 3- Exterior opening protection

1.4 Submitted By:

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2.0 Product Evaluation

2.1 Wind Loads:

a. Static Pressure:

The 3M Scotchshield Window film was tested under the Dade County Protocol PA 202-94, "Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure". This is equivalent to the ASTM E1886/1996 test standards, however the submitted test report is well beyond the indicated expiration date of 04-31-97. Regardless, the reported results conducted on a 48-7/8" wide by 78-7/8" high window opening are as follows:

Table 1. Static Pressure Test Results

Test Method	Test Conditions	WRD Requirements	Test Conclusion
Static Load Test	+65.0 psf, -65.0 psf	IBC Section 1714.5.2	PASS

This test was conducted on a fixed, 3/16 in., fully tempered glass window. The performance of the Window film system will be affected by the basic structure capabilities of the window system, type of frame, thickness, size and type of glass (tempered or regular). Therefore, these results cannot be assured for all windows to which the film is applied.

b. Cyclic Wind Pressure Loading:

Following impact testing, cyclic wind pressure testing was conducted under the Dade County Protocol PA 203-94, "Criteria for Testing Products Subjected to Cyclic Wind Pressure Loading". The results of the test are included in Table 2.

Table 2. Cyclic Loading Test Results

Test Method	Test Conditions	Deflections	Test Conclusion
Cyclic Load Test	+65.0 psf, -65.0 psf	+0.017/-0.019 in	PASS

2.2 Impact Resistance:

The 3M Scotchshield Window film was tested per PA 201 "Impact Test Procedures" using objects equivalent to the ASTM E1886/1996 missile A.

Table 3. Impact Test Results

Test Method	Test Conditions	WRD Requirements	Test Conclusion
Impact Test	Missile Type A	Missile Type C	PASS

This indicates that the window film does not have the impact resistance required by the Wind Resistive Device loss mitigation grant program for windows, doors, sliding glass doors, etc. The window film does however have the impact resistance required for skylights.

2.3 Installation:

A set of installation drawings was included with the product submittal. 3M Scotchshield is to be installed in strict accordance with the manufactures published instructions.

March 7, 2008

2.4 Substantiating Data:

- a. Test Report Prepared by National Certified Testing Laboratories, LLC dated 4/13/97, Report No. NCTL-210-1920-1,2,3 (S)(I)(C), signed and sealed by Barry Portnoy, P.E. (FL License # unknown)

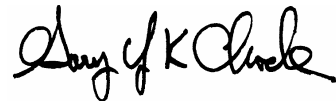
3.0 Findings

Evaluation in review of the submitted data indicates that the 3M Scotchshield Window film as described in this report does not conform to the requirements of the loss mitigation grant program and is not an acceptable WRD for use on window, door, or sliding glass door glazed openings.

The submitted test results indicate that this product meets missile level rating A. Per the technical specifications, a minimum missile level rating of C is required to meet the WRD requirements for all fixed or operable windows, sliding doors, and entry doors. A missile level rating of A is however the minimum protective standard for skylights. The 3M Scotchshield Window film may be approved for use on only skylights on all construction types provided that the skylight has been installed per approved details to meet the wind load requirements of IBC 1714.5.2.

3.1 Limitations:

- a. 3M Scotchshield Window film qualifies as an approved WRD product for use on skylights only.
- b. The skylight must be installed per approved details to meet the wind load requirements of IBC 1714.5.2.
- c. 3M Scotchshield Window film must be installed in accordance with the manufacturer's published installation instructions.



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